



AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A method for delivering disordered breathing therapy to a patient, comprising:

~~obtaining~~ measuring cardiac intervals between cardiac beats;

~~determining~~ computing a first indicated pacing interval based at least on a measured cardiac interval duration and a previous value of the first indicated pacing interval; and

providing cardiac pacing to mitigate disordered breathing based on the first indicated pacing interval.

2. (Original) The method of claim 1, further comprising initiating delivery of the disordered breathing therapy based on detection of disordered breathing.

3. (Original) The method of claim 1, further comprising initiating delivery of the disordered breathing therapy based on prediction of disordered breathing.

4. (Original) The method of claim 1, wherein:

obtaining cardiac intervals comprises obtaining intervals between ventricular beats;

and

providing the cardiac pacing to mitigate the disordered breathing comprises providing ventricular pacing.

5. (Original) The method of claim 1, wherein:

obtaining the cardiac intervals comprises obtaining intervals between atrial beats;

and

providing the cardiac pacing to mitigate the disordered breathing comprises providing atrial pacing.

6. (Original) The method of claim 1, further comprising adapting the cardiac pacing based on characteristics of the disordered breathing.

7. (Original) The method of claim 1, further comprising adapting the cardiac pacing based on therapy efficacy.

8. (Original) The method of claim 1, further comprising adapting the cardiac pacing based on an impact of the therapy on the patient.

9. (Original) The method of claim 1, wherein the cardiac interval duration comprises a most recent cardiac interval duration.

10. (Original) The method of claim 1, wherein the cardiac interval duration comprises previous cardiac interval duration.

11. (Original) The method of claim 1, wherein providing the cardiac pacing to mitigate the disordered breathing comprises providing atrial pacing.

12. (Original) The method of claim 1, wherein providing the cardiac pacing to mitigate the disordered breathing comprises providing ventricular pacing.

13. (Original) The method of claim 1, wherein providing the cardiac pacing to mitigate the disordered breathing comprises providing bi-ventricular pacing.

14. (Original) The method of claim 1, wherein providing the cardiac pacing to mitigate the disordered breathing comprises providing overdrive pacing.

15. (Original) The method of claim 1, wherein providing the cardiac pacing to mitigate the disordered breathing comprises pacing at a rate above an intrinsic rate.

16. (Currently amended) The method of claim 1, wherein measuring the cardiac intervals comprises measuring each cardiac interval duration between successive cardiac events beginning from an initiating event of a cardiac interval comprises comprising a sensed or paced cardiac beat.

17. (Currently amended) The method of claim 1, wherein measuring the cardiac intervals comprises measuring each cardiac interval duration between successive cardiac events from an initiating event of a cardiac interval comprises a paced to a terminating event comprising a sensed cardiac beat.

18. (Currently amended) The method of claim 1, wherein computing the first indicated pacing interval comprises combining the previous value of the first indicated pacing interval and the measured a terminating event of a cardiac interval duration comprises a sensed cardiac beat.

19. (Currently amended) The method of claim 1, wherein computing a terminating event of a cardiac interval comprises a paced cardiac beat the first indicated pacing interval comprises combining the previous value of the first indicated pacing interval and the measured cardiac interval duration using a recursive filter.

20. (Currently amended) A system for providing disordered breathing therapy to a patient, comprising:

a circuit configured to detect cardiac beats and obtain cardiac intervals between cardiac beats;

a cardiac pacing circuit coupled to the controller and configured to provide cardiac pacing to mitigate disordered breathing based on the first indicated pacing interval.

21. (Currently amended) The therapy system of claim 20, wherein the controller comprises a timer configured to measure durations of the cardiac intervals ~~wherein the cardiac beats are sensed beats.~~

22. (Currently amended) The therapy system of claim 20, wherein the controller comprises:
a timer configured to measure durations of the cardiac intervals between successive
~~wherein the cardiac beats are paced beats;~~ and
a filter configured to combine the previous value of the first indicated pacing interval and the measured cardiac interval duration.

23. (Original) The therapy system of claim 20, further comprising disordered breathing detection circuitry coupled to the controller and configured to detect disordered breathing and initiate therapy to mitigate the disordered breathing based on the detection of disordered breathing.

24. (Original) The therapy system of claim 20, further comprising a detection system coupled to the controller, the detection system configured to detect one more characteristics of the disordered breathing, wherein the controller is further configured to adjust the cardiac pacing based on the one or more disordered breathing characteristics.

25. (Original) The therapy system of claim 20, further comprising a detection system coupled to the controller, the detection system configured to detect an impact of the disordered breathing therapy on the patient, wherein the controller is further configured to adjust the cardiac pacing based on the impact of the disordered breathing therapy on the patient.

26. (Original) The therapy system of claim 20, further comprising a disordered breathing prediction unit coupled to the controller and configured to detect disordered breathing and initiate therapy to mitigate the disordered breathing based on the prediction of disordered breathing.

27. (Original) The therapy system of claim 20, wherein the cardiac pacing circuit is configured to pace one or more atria.

28. (Original) The therapy system of claim 20, wherein the cardiac pacing circuit is configured to pace one or more ventricles.

29. (Original) The therapy system of claim 20, wherein the cardiac interval duration comprises a previous cardiac interval duration.

30. (Original) The therapy system of claim 20, wherein the cardiac interval duration comprises a most recent cardiac interval duration.

31. (Currently amended) A system for providing disordered breathing therapy, comprising:
means for ~~obtaining~~ measuring cardiac intervals between cardiac beats;
means for ~~determining~~ computing a first indicated pacing interval based at least on a cardiac interval duration and a previous value of the first indicated pacing interval; and
means for providing cardiac pacing to mitigate disordered breathing based at least on the first indicated pacing interval.

32. (Original) The system of claim 31, further comprising means for initiating the disordered breathing therapy based on detection of disordered breathing.

33. (Original) The system of claim 31, further comprising means for initiating the disordered breathing therapy based on prediction of disordered breathing.

34. (Original) The system of claim 31, further comprising means for adapting the cardiac pacing based on characteristics of the disordered breathing.

35. (Original) The system of claim 31, further comprising means for adapting the cardiac pacing based on therapy efficacy.

36. (Original) The system of claim 31, further comprising means for adapting the cardiac pacing based on an impact of the therapy on the patient.